

**SECTION 02060  
EROSION AND SEDIMENTATION CONTROL**

**PART 1 - GENERAL**

**1.01 DESCRIPTION**

- A. This Section specifies furnishing and applying calcium chloride for dust control and erosion control barriers for the control of erosion and sedimentation on the site and adjacent to the sites. This section also includes the installation of silt curtains in existing catch basins as directed by the Engineer.
- B. Dust control operations shall meet the requirements of the Commonwealth of Massachusetts Department of Environmental Protection "310 CMR 7.09: Air Pollution Control Regulations."
- C. Erosion control barrier shall consist of hay bales and silt fence as detailed in the Drawings and/or as directed by the Engineer.
- D. Related work described elsewhere:
  - 1. Section 02200, EARTHWORK
  - 2. Section 02485, SEEDING AND SODDING.

**1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. The silt fence fabric shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement.
- B. Each roll of fabric shall be labeled or tagged to provide product identification sufficient for field identification, as well as inventory and quality control purposes.
- C. Each roll of fabric shall be stored in a manner that will protect them from the elements. If stored outdoors, they shall be elevated and protected with a waterproof cover.
- D. Hay bales shall be stored in a manner that will protect them from the elements. If stored outdoors, they shall be elevated and protected with a waterproof cover.

### **1.03 JOB CONDITIONS**

- A. The Contractor shall be responsible for protection of slopes at 2:1 or shallower during the construction period and also during any maintenance period specified in Section 02485, Seeding and Sodding. Where clearing and grubbing, and regrading of such existing slopes is required, provide suitable means for erosion control. Re-grade slopes as necessary.

### **1.04 QUALITY CONTROL**

- A. Erosion control mats shall be installed in accordance with the manufacturer's recommendations. Where manufacturer's recommendations conflict with details shown on the Contract Drawings, the more stringent, in the opinion of the Engineer, shall apply.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS AND EQUIPMENT**

- A. Calcium Chloride shall conform to the requirements of AASHTO-M144, Type I or Type II. Use mechanical spreader or other approved equipment.
- B. Hay bales shall be individually banded and staked into the ground:
  - 1. Hay bales shall consist of hay or straw for outdoor use be banded with string or nylon cord (minimum two bands per bale) and shall be staked into the ground as shown on the Drawings for Type A or Type B.
  - 2. Stakes for hay bales shall be standard 2 inch by 2 inch wood stakes or approved equal.
- C. Silt fence shall consist of a self-supported or wire supported geotextile silt fence with support posts:
  - 1. Fibers used in the manufacture of geotextiles, and the threads used in joining geotextiles by sewing, shall consist of long chain synthetic polymers composed of at least 85% by weight polyolefins or polyesters.
  - 2. Both the geotextile and threads shall be resistant to chemical attack, mildew, and rot.



nonparticulate debris, such as steel reinforcing bars. No sandblasting is permitted unless dust therefrom is confined. Only wet cutting of concrete blocks, concrete, and asphalt is permitted.

- D. Stop all earthwork when, as determined by the Engineer, dust control procedures have not proved effective in controlling dust. Resumption of work may only begin when site conditions have improved or constructions procedures are modified to the satisfaction of the Engineer.

**3.02 TEMPORARY EROSION CONTROL**

- A. Method of stripping vegetation shall be such as to minimize erosion. Fills shall be placed and compacted in such a manner that soil sliding and erosion is minimized. Grading shall be done in such a manner as not to divert water on to the property adjoining the Authority's right-of-way or construction site without expressed written permission of the land owner and the local Conservation Commission. If the Contractor fails to employ adequate and acceptable erosion control techniques during construction, the Engineer may order a suspension of the work until implementation of satisfactory techniques are agreed upon and demonstrated, and the Contractor shall have no claim for damages or time extension resulting from such delays.
- B. Staked hay bale siltation barriers shall be installed at the following locations:
  - 1. Toe of embankment construction.
  - 2. Toe of abutments/retaining walls and temporary earthwork stockpiles.
  - 3. Across construction ditches prior to entry into any drainage system or waterway.
  - 4. Other locations shown on the Contract Drawings, as dictated by the Order of Conditions or as designated by the Engineer.
  - 5. Toes of temporary earthwork stockpile.
- C. Abut hay bales to form a continuous barrier. Hay bales shall be entrenched 6" as shown in the Drawings. Secure bales in place with two stakes per bale.
- D. Silt fence construction shall be adequate to handle the stress from sediment loading. Geotextile at the bottom of the fence shall be buried a minimum of 6 inches in a trench so that no flow can pass

- E. Sediment controls shall be in place prior to any soil disturbing activities including, but not limited to earthwork, clearing and grubbing, dewatering and excavation.
- F. Any disturbed soils shall be stabilized, either permanently or temporarily, within 2 weeks of disturbance or when directed by the Engineer.

- A. Maintain the integrity of erosion control barriers as long as they are necessary to contain sediment runoff. Promptly repair or replace ineffective barriers while they are still necessary.
- B. Inspect all barriers immediately after each rainfall and at least daily during prolonged rainfall. Any deficiencies shall be immediately corrected. Make a daily review of the location of barriers in areas where construction activities have changed the natural contour and drainage runoff to ensure that the barriers are properly located for effectiveness. Where deficiencies exist, additional barriers shall be installed as directed by the Engineer.
- C. Sediment deposits shall either be removed when the deposit reaches approximately one-half of the height of the barrier or a second barrier shall be installed as directed by the Engineer. Sediment shall be removed and disposed of periodically from behind the hay bales. In no case shall the accumulated sediment be allowed to rise above the mid height of the bale. All sediment shall be disposed of in an approved manner at the completion of the work.
- D. Erosion control barriers shall remain in place until the Engineer directs that they be removed. Upon removal, remove and dispose of any excess silt accumulations, dress the area to give a pleasing appearance, and vegetate all bare areas in accordance with Section 02485.

- E. Erosion control barriers will remain the property of the Contractor, may be re-used at other locations provided the materials meet these specifications requirements, and shall be removed and disposed of at the completion of the Contract unless directed otherwise by the Engineer.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.01 MEASUREMENT**

- A. Separate measurement and payment will not be made for Calcium Chloride for Dust Control, or silt curtains in existing catch basins, but all costs in connection therefore shall be considered incidental to the item of work to which it pertains.
- B. Erosion control barriers for Erosion Control System will be measured by the number of linear feet complete in place, including reuse and relocation, as approved by the Engineer.

### **4.02 PAYMENT**

- A. Payment for Erosion Control System will be made at the Contract Unit Prices for the quantities determined as specified above.

### **4.03 PAYMENT ITEMS**

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
0282.202	Erosion Control System	LF

**END OF SECTION**